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EXAMINER	
AHN, SANGWOO	
ART UNIT	PAPER NUMBER
2168	
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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/771,583	HALL, KENWOOD	
	Examiner	Art Unit	
	SANGWOO AHN	2168	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *04 March 2009*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1 – 3, 5 – 18, 23 – 25 and 27 – 29* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1 – 3, 5 – 18, 23 – 25 and 27 – 29* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Response to Amendment

1. Claims 1 – 3, 5 – 18, 23 – 25 and 27 – 29 are pending.

Claims 1 – 3, 5 – 18, 23 – 25 and 27 – 29 have been amended.

Claims 4, 19 - 22 and 26 have been canceled.

Response to Arguments

2. Applicant's arguments have been fully considered but they are not persuasive.

With regards to 35 U.S.C. 101 rejection, the claims lack the necessary physical articles or objects to constitute a machine or a manufacture (in other words, system, apparatus or device) within the meaning of 35 USC 101. In fact, page 6 of the specification states that "component," "device," "controller," and the like have been defined as either hardware, a combination of hardware and software, software or software execution. Therefore, all the elements within the claim can be reasonably interpreted as software alone. They are clearly not a series of steps or acts to be a process nor are they a combination of chemical compounds to be a composition of matter, since each of them explicitly claims "a system" or "a device". As such, they fail to fall within a statutory category. They are, at best, function descriptive material *per se*.

Note: In most cases, inclusion of a computer processor and computer readable storage medium within the body of a claim can overcome this 101 issue.

Applicant mainly argued that Mehta does not teach or suggest "arbiter component that facilitate interaction between the computer network and the industrial device".

Examiner does not agree with this assertion. Examiner contends that the claim is written in such a broad way that they fail to distinguish themselves from the prior art. The terms "computer network" and the "industrial device" can have very broad interpretation which Examiner is entitled give. The industrial devices can be computers, monitor, printers, network device, etc. The computer network is two more computers that are connected together. Hence, as long as there are two or more computers connected, said computers comprising database tables and access capability, the purported claim limitations are covered. The prior art does encompass this type of environment, which is evident just by viewing Figure 1. Any narrower interpretation would be inappropriate unless more detailed limitations are recited within the claim.

Applicant then argued that Mehta does not teach a mapping component as cited in claim 1. In response to applicant's argument that the references fail to show certain features of applicant's invention, it is noted that the features upon which applicant relies (i.e., mapping from an industrial unit to a table for eliminating or mitigating a requirement of proprietary data access software) are not reflected in the rejected claim(s). Although the claims are interpreted in light of the specification, limitations from the specification are not read into the claims. See *In re Van Geuns*, 988 F.2d 1181, 26 USPQ2d 1057 (Fed. Cir. 1993).

For the foregoing reasons, Examiner sustains the rejections of pending claims.

Claim Objections

Claim 10 is objected to because of the following informalities:

Lines 6 – 7 of claim 10 recites "the mapping component part of an industrial processing unit." There seems to be a grammatical error.

Appropriate correction is required.

Claim Rejections - 35 USC § 101

3. 35 U.S.C. 101 reads as follows:

> Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

4. Claims 1, 10, 23, 29, and their dependent claims are rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter.

Regarding claims 1, 10 and 29, the claims lack the necessary physical articles or objects to constitute a machine or a manufacture within the meaning of 35 USC 101. They are clearly not a series of steps or acts to be a process nor are they a combination of chemical compounds to be a composition of matter, since each of them explicitly claims "a system." As such, they fail to fall within a statutory category. They are, at best, function descriptive material *per se*.

When functional descriptive material is recorded on some computer-readable medium and executed by a processor, it becomes structurally and functionally

interrelated to the medium and will be statutory in most cases since use of technology permits the function of the descriptive material to be realized.

Claim 23 is a method claim that fails the "machine-or-transformation" test applied by the court in In Re Bilski (545 F.3d 943, 961). The claim is not tied to a particular machine. Also, the claim does not transform an article. Therefore, the claim is directed to non-statutory matter. The method fails to tie another statutory category and does not physically transform an article to another physical article. Examiner respectfully advises the Applicant to include additional step(s) to tie the post solution activity(ies) to a physical hardware.

All dependent claims are rejected due to dependency.

Claim Rejections - 35 USC § 102

5. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

6. Claim 1 is rejected under 35 U.S.C. 102(b) as being anticipated by U.S. Patent Number 5,999,933 issued to Abhay Mehta (hereinafter "Mehta").

Regarding claim 1, Mehta discloses,

A computer implemented system that facilitates access to industrial data, comprising the following computer executable components:

a industrial control processing unit with a mapping component that generates a database table(s) from data associated with an industrial device(s), the database table(s) accessible through a standard database interface without requirement of proprietary data access software tailored for the industrial device(s) (column 4 lines 26 – 27, column 5 lines 46 – 50: data structures are mapped onto a logical table, et seq.), and

an arbiter component that facilitates access between industrial devices and computer network for an access to the database tables (See Remarks, column 6 liens 1 – 15, column 21 lines 4 – 7, et seq.).

Claim Rejections - 35 USC § 103

7. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

8. Claims 2 – 3, 5 – 7, 9 – 18, 23 – 25 and 28 – 29 are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent Number 5,999,933 issued to Abhay Mehta (hereinafter "Mehta") in view of U.S. Publication Number 2003/0172046 issued to Zachariah Scott (hereinafter "Scott").

Regarding claim 2, Mehta discloses the system of claim 1.

Mehta does not explicitly disclose a Java DataBase Connectivity (JDBC) connection.

However, Scott discloses the standard database connection associated with the standard database interface is a Java DataBase Connectivity (JDBC) connection (paragraph 22 lines 4 – 6, et seq.). At the time of the present invention, it would have been obvious to a person of ordinary skill in the data processing art to combine the two references because Scott's data exchange/access method via a standard database connection combined with Mehta's overall system would have provided technologies that simplify the management of non-database systems (Scott: paragraph 7 lines 2 – 3, et seq.) and permit querying data stored in tables for relatively easy analysis of the data (Mehta: column 2 lines 51 – 53, et seq.).

Regarding claim 3, Mehta discloses the database table is a relational database table (column 4 lines 21 – 28, et seq.).

Regarding claim 5, Mehta discloses the database table is accessed via one or more remote systems that employ disparate operating systems (column 4 lines 44 – 49, et seq.).

Regarding claim 6, Mehta discloses the disparate operating systems include one or more of UNIX, HPUX, IBM, AIX, Linux and Microsoft (column 4 lines 44 – 49, et seq.).

Regarding claim 7, Mehta and Scott disclose the access includes read (Mehta: column 21 lines 4 – 7, et seq.) and write access (Scott: paragraph 27 lines 3 – 6, et seq.).

Regarding claim 9, Mehta discloses the interface component facilitates discovery of industrial device data and the database table (column 21 lines 4 – 7, et seq.).

Regarding claim 10, Mehta discloses,

A computer implemented industrial device (column 21 lines 4 – 7, et seq.), comprising:

an interface that facilitates reading from one or more relational database tables stored within the industrial device, without requirement of platform specific software tailored for an industrial device(s) controlled by the industrial device (column 21 lines 4 – 7, et seq. and See Response to Arguments);

a mapping component that maps one or more data structure associated with the industrial device to the one or more relational database tables; the mapping component part of an industrial processing unit (column 4 lines 26 – 27, column 5 lines 46 – 50, et seq.); and

an intelligence component that employs classifiers to determine when, how and which data structures should be transformed to corresponding database tables column 3 lines 1 – 10, column 6 lines 53 – 64, Figure 1: 146 and 168, et seq.).

Mehta doe not explicitly disclose "industrial control device".

However, Scott discloses "industrial control device" (paragraph 15 lines 6 – 10, paragraph 5 lines 5 – 7, paragraph 22 lines 4 – 6, et seq.). At the time of the present invention, it would have been obvious to a person of ordinary skill in the data processing art to combine the two references because Scott's data industrial control device combined with Mehta's overall method would have provided technologies that simplify

the management of non-database systems (Scott: paragraph 7 lines 2 – 3, et seq.) and permit querying data stored in tables for relatively easy analysis of the data (Mehta: column 2 lines 51 – 53, et seq.).

Regarding claim 11, Mehta discloses the mapping component is executed within one of a module of the industrial control device, a host computer, and the interface (Figure 3, et seq.).

Regarding claim 12, Mehta discloses the mapping component is executed without knowledge of industrial device data layout (column 5 lines 48 – 50, et seq.).

Regarding claim 13, Scott discloses the access for at least one of transaction commitment, transaction rollback and transaction termination (paragraphs 27 – 28, et seq.).

Regarding claim 14, Scott discloses the standard database connection is employed to establish a connection with the interface by a remote device (paragraph 5 lines 5 – 7, paragraph 22 lines 4 – 6, et seq.).

Regarding claim 15, Scott discloses the standard database connection is an SQL-compliant connection (paragraphs 27 – 29, et seq.).

Regarding claim 16, Scott discloses the standard database connection is a Java DataBase Connectivity (JDBC) connection (paragraph 5 lines 5 – 7, paragraph 22 lines 4 – 6, et seq.).

Regarding claim 17, Scott discloses a JDBC Open or Select command(s) to read data and a JDBC Post command to write data (paragraphs 27 – 28, paragraph 27, and chart 1).

Regarding claim 18, Mehta and Scott disclose an intelligence component that facilitates mapping, reading (Mehta: column 5 lines 46 – 50, column 21 lines 4 – 7, et seq.) and writing (Scott: paragraph 27 lines 3 – 6, et seq.) the industrial device data.

Regarding claim 23, Mehta discloses,

A computer implemented method for accessing industrial device data, comprising;

generating a database table(s) from the industrial device data via a processing module;

establishing a connection with the industrial device (Figure 1, et seq. and See Response to Arguments);

discovering relational database tables stored within the industrial device via an intelligence component (column 2 lines 44 – 54, et seq.); and

accessing the data within the relational database tables, without platform specific data access software associated with the industrial device(s) (column 21 lines 4 – 7, See Response to Arguments, et seq.).

Mehta does not explicitly disclose "an SQL-compliant database connection".

However, Scott discloses "an SQL-compliant database connection" (paragraph 5 lines 5 – 7, paragraph 22 lines 4 – 6, et seq.). At the time of the present invention, it would have been obvious to a person of ordinary skill in the data processing art to combine the two references because Scott's data exchange/access method via an SQL-compliant database connection combined with Mehta's overall system would have provided technologies that simplify the management of non-database systems (Scott:

paragraph 7 lines 2 – 3, et seq.) and permit querying data stored in tables for relatively easy analysis of the data (Mehta: column 2 lines 51 – 53, et seq.).

Regarding claim 24, Scott discloses the SQL-compliant database connection is a Java Database Connectivity (JDBC) connection (paragraph 5 lines 5 – 7, paragraph 22 lines 4 – 6, et seq.).

Regarding claim 25, Scott discloses the access for at least one of transaction commitment, transaction rollback and transaction termination (paragraphs 27 – 28, et seq.).

Regarding claim 28, Mehta discloses concurrently accessing more than one of the relational databases (column21 lines 5 – 11, et seq.).

Regarding claim 29, Mehta discloses,

An industrial control processing system, comprising:

means for opening a database connection with the industrial device (Figure 3, column 4 lines 61 – 63, et seq.);

means for mapping data from at least one data structure to at least one database table by employing an intelligence component with classifiers that determines when, how and which computer readable data structure should be transformed to corresponding database tables, (column 5 lines 46 – 50, column 6 lines 53 – 64, et seq.);

means for discovering the at least one database table (column 21 lines 4 – 7, et seq.); and

means accessing the discovered database tables (column 21 lines 4 – 7, et seq.).

Mehta does not explicitly disclose means for retrieving suitable protocols and configuration (Figure 1: 146 and 168, et seq.).

However, Scott discloses means for retrieving suitable protocols and configuration and accessing the discovered database tables (paragraph 22 lines 4 – 6, paragraph 27 lines 2 – 4, paragraph 31 lines 12 – 14, et seq.). At the time of the present invention, it would have been obvious to a person of ordinary skill in the data processing art to combine the two references because Scott's means for retrieving suitable protocols and configuration combined with Mehta's overall system would have provided technologies that simplify the management of non-database systems (Scott: paragraph 7 lines 2 – 3, et seq.) and permit querying data stored in tables for relatively easy analysis of the data (Mehta: column 2 lines 51 – 53, et seq.).

9. Claims 8 is rejected under 35 U.S.C. 103(a) as being unpatentable over Mehta in view of U.S. Publication Number 2004/0143791 issued to Yuichi Ito et al. (hereinafter "Ito").

Regarding claim 8, Mehta discloses the system of claim 1.

Mehta does not explicitly disclose the aspect of transferring table data as a binary file.

However, Ito discloses transferring table data as a binary file in paragraph 6 lines 10 – 14. At the time of the present invention, it would have been obvious to a person of ordinary skill in the data processing art to combine the references because Ito's binary file transfer method would have enabled Mehta's overall system for fast and efficient

transfer of data, taking less time than the original text-based code (paragraph 7 lines 7 – 9, et seq.).

10. Claims 27 is rejected under 35 U.S.C. 103(a) as being unpatentable over Mehta and Scott as applied to claims above, and further in view of U.S. Publication Number 2004/0143791 issued to Yuichi Ito et al. (hereinafter "Ito").

Regarding claim 27, Mehta and Scott disclose the method of claim 27.

Mehta and Scott do not explicitly disclose the aspect of transferring table data as a binary packets.

However, Ito discloses transferring table data as a binary file in paragraph 6 lines 10 – 14. At the time of the present invention, it would have been obvious to a person of ordinary skill in the data processing art to combine the references because Ito's binary packet transfer method would have enabled Mehta and Scott's overall system for fast and efficient transfer of data, taking less time than the original text-based code (paragraph 7 lines 7 – 9, et seq.).

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to SANGWOO AHN whose telephone number is (571)272-5626. The examiner can normally be reached on M-F 10-6.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Tim T. Vo/
Supervisory Patent Examiner, Art Unit 2168

6/17/2009
/S. A./
Examiner, Art Unit 2168